UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

NOV 20 2013

REPLY TO THE ATTENTION OF:
WW-16J

U.S. Army Corps of Engineers, Louisville District
ATTN: Mr. Sam Werner, CELRL-OP-FW
P.O. Box 489
Newburgh, Indiana 47629

Re: LRL-2013-423-sew, Peabody Midwest Mining, LLC/Somerville South Amendment 3

Dear Mr. Werner:

The U.S. Environmental Protection Agency has reviewed the subject public notice and the July 29, 2013 Section 404 permit application, in which the applicant, Peabody Midwest Mining, LLC (Peabody), proposes to fill 84,358 linear feet of streams and 27.22 acres of wetlands for the purpose of conducting surface coal mining activities at the 1764.4-acre Somerville South Amendment 3 Mine in Gibson County, Indiana, approximately 2.7 miles northwest of the town of Lynnville. The project is located in the headwaters of Smith Fork and Big Creek. Smith Fork is a tributary to Pigeon Creek which flows into the Ohio River.

Corps request to Peabody for additional information

On September 17, 2013 the Corps of Engineers, Louisville District (Corps) sent Peabody an email requesting additional information and revisions to specific sections of the permit application for Somerville South Amendment 3. We share many of the concerns the Corps' articulated in their email correspondence. Peabody responded to the Corps' request on October 4, 2013. Based on the response, EPA believes the following issues raised in the Corps' request require further discussion.

- Peabody needs to provide more information about how the post-mining landscape will support the mitigation proposed, specifically with regard to hydrology.
- Peabody needs to provide more information about how 13,821 linear feet of stream mitigation in the form of 'enhanced linear channels' will incorporate the concepts of natural channel design and make natural, stable transitions in to the 'natural channel stream mitigation' channels. These should not be stormwater conveyance channels.
- Peabody needs to provide more information about how their proposed financial assurances will be sufficient to cover Section 404 mitigation if an assurance is not provided specifically for mitigation. They propose to hold back 15% of the Surface Mining Control and Reclamation (SMCRA) bond rate per acre until Section 404 mitigation is released from monitoring; however, that bond is held by Indiana

Department of Natural Resources. Peabody needs to provide information on: 1.) how those funds can be accessed, if necessary, and 2.) whether the funds are sufficient to cover any potential adaptive management or remedial action measures at the mitigation sites.

EPA offers additional comments based on our review of the public notice and permit application.

Avoidance and Minimization

The 404 (b)(1) Guidelines (Guidelines) require the applicant to demonstrate there are no practicable alternatives available that would have a less adverse impact on the aquatic environment for non-water dependant activities. For special aquatic sites, the Guidelines presume that less damaging upland alternatives are available for these activities unless demonstrated otherwise by the applicant.[1] An alternative is practicable if it is capable of being done considering cost, logistics and available technology in light of overall project purpose.[2] After reviewing the information available, EPA believes the applicant has failed to demonstrate that impacts have been avoided and minimized to the maximum extent practicable, and has not clearly demonstrated that its preferred alternative is the least environmentally damaging practicable alternative (LEDPA).

According to the Guidelines, the applicant should present a reasonable range of alternatives that avoid and minimize the impacts to streams and wetlands to the extent practicable. The amount of effort and detail in the analysis should be commensurate with the level of aquatic resource impacted. The alternatives analysis should contain a full range of alternatives including, but not limited to, alternative mine designs and mining methods, as well as a thorough discussion of the practicability of each. The applicant must demonstrate that the following sequence of steps has been taken: 1.) avoidance of aquatic resources and hydrology sources, 2.) minimization of impacts to aquatic resources (documentation of minimization efforts should include the utilization of operational, geochemical, hydrological and sediment control Best Management Practices), and 3.) compensation for any unavoidable losses. These steps have not been clearly documented in the public notice or in the permit application.

Cumulative Impacts Analysis (CIA)

In order to fully analyze the past, present, and reasonable foreseeable impacts as required under the National Environmental Policy Act (NEPA) and the Guidelines, Peabody should enhance the CIA to include detailed changes in hydrology, drainage patterns, and channel composition in the impacted watersheds. Impact assessments for wetlands and streams should include direct and indirect impacts from previous and current actions as well as impacts from future actions as a result of changes in surface and groundwater hydrology.

On page 49 of the permit application, Peabody states that "because Somerville South Mine Amendment 3 project comprises a small portion of the Headwaters Smith Fork and Big Creek 12-digit HUC watersheds, potential quantity impacts resulting from the proposed operation

[1] 40 C.F.R. § 230.10(a)(3)
[2] 40 C.F.R. § 230.10(a)(2)

would be minimal." Three Section 404 permits have been issued for the Somerville Mine complex since 2008. A total of 200,338 linear feet of stream impacts and 53.90 acres of wetland impacts have been authorized on the 7214.9-acre Somerville Mine complex. An additional 84,358 linear feet of stream impacts and 27.22 acres of wetland impacts are proposed in the 1764.4-acre Somerville South Amendment 3 area. The proposed and permitted impacts at the Somerville Mine complex is 284,696 linear feet of streams and 81.12 acres of wetlands over 8979.3 acres.

EPA recommends that Peabody provide information regarding the status of reclamation and on-site mitigation over the entire Somerville Mine complex. This will define the extent of the aquatic resources actively being impacted and the status of the reclamation and reestablishment of watershed connectivity, especially for the Smith Fork watershed. Impacts to the Smith Fork watershed were first permitted for the Somerville Mine complex in 2008 and then in 2012. Aquatic resources may still be severed from downstream waters due to active mining at the Somerville Mine complex. The Somerville South Mine Amendment 3 project would continue to impact the Smith Fork watershed for several more years. Extensive temporal loss of aquatic functions has occurred and will continue to occur if this mine is permitted as proposed. Additional information on the status of reclamation and on-site mitigation will help identify the full extent of temporal loss and cumulative impacts to the affected watersheds.

Water Quality

Peabody makes a broad claim that "any effects of the Somerville South (Amendment 3) project on surface water quality should be minimal" (page 46 of the permit narrative); however they fail to substantiate that claim. The Guidelines state that "no discharge of dredged or fill material may be permitted if it causes or contributes, after consideration of disposal site dilution and dispersion, to violations of any applicable State water quality standard."[3] Peabody must demonstrate that the operation will not cause or contribute to violations of State Water Quality Standards. Peabody should consider providing water quality monitoring data for the Somerville Mine complex to show the existing water quality associated with mine discharges.

Mitigation

As mentioned above, compensatory mitigation is the last step in the sequence of a Clean Water Act Section 404 permit review.[4] An in-depth discussion regarding mitigation is premature given that Peabody first needs to adequately address avoidance and minimization to determine the LEDPA. However, the following information is critical to evaluate whether the proposed mitigation has the potential to be successful.

Peabody proposes to establish 71.21 acres of forested wetland on-site after mining is completed to compensate for impacts to jurisdictional wetlands. Peabody also proposes to reconstruct 69,234 linear feet of streams on-site after mining is completed to compensate for impacts to jurisdictional streams. EPA has concerns about whether establishing 71.21 acres of wetland on-site post mining is achievable. Peabody needs to provide substantial evidence demonstrating the

[3] 40 C.F.R. § 230.10(b)(1)
[4] 40 C.F.R. § 230.91(c)

site can support 2.6 times the existing acreage of jurisdictional wetlands in the post mining landscape. Similar examples of successful attempts at wetland replacement at higher ratios than currently exist on-site should be provided to support the proposed mitigation. Lack of supporting evidence will require Peabody to pursue off-site mitigation within the impacted watersheds.

The *Hydrology* portion of the *Mitigation Work/Implementation* section on page 79 of the permit narrative must be expanded, especially since insufficient hydrology has been identified by the Corps as problematic on reclaimed areas of the Somerville Mine complex where streams are being reconstructed as part of mitigation. The expanded discussion should include information on whether the reconstructed stream channels will have sufficient hydrology to achieve the intended flow regimes in the post mining landscape.

Monitoring

As a part of the monitoring program for affected and reconstructed streams, biological monitoring should be required to ensure there is no degradation to the aquatic communities. Biological monitoring, along with water chemistry and physical assessments, should occur prior to the initiation of mining activities to establish baseline conditions, during the mining activities to assist in determining potential impacts to aquatic habitat and water quality downstream of the impacts, and should continue at least five years after the completion of stream restoration and site reclamation activities at the mine site, where appropriate, to determine mitigation success. Peabody has not proposed biological monitoring during mining and should include it as part of their monitoring program.

Minimum Success Criteria for Streams

The success criteria for streams should include a requirement to meet the proposed flow regime for each reconstructed channel. In addition, Peabody proposes to monitor the biological community post mining, but did not indicate what the results should show. EPA recommends that the composition of the biological communities in the reconstructed streams be similar to or more diverse than those in the existing streams.

Financial Assurances

Financial assurances must be addressed in a Section 404 context to achieve compliance with the Guidelines. According to SMCRA regulations, bond release occurs in phases. The bond release is not contingent upon the stream and wetland mitigation meeting performance criteria under Section 404 of the Clean Water Act at any phase. As mentioned above, Peabody needs to provide more information about how the financial assurances they propose will be sufficient to cover Section 404 mitigation.

In conclusion, EPA objects to the project as proposed because it does not comply with the Guidelines. Thank you for the opportunity to provide comments on this project. Please keep EPA apprised of any response to these comments. If you have any questions, or if we can be of further assistance, please contact Melissa Blankenship at 312-886-6833 or 503-326-5020.

Sincerely,

Peter Swenson

Peter Swenson, Chief
Watersheds and Wetlands Branch

cc: David Carr, IDEM
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